

K6YQT

PAARA NEWSLETTER
VOLUME 52 NUMBER 2, February 2003

W6OTX

PAARAgraphs



Celebrating 66 years as an active ham radio club—Since 1937
Newsletter for the Palo Alto Amateur Radio Association, Inc.



CALENDAR

February.....7, **PAARA Meeting, 7:30**
Menlo Park Recreation Center
700 Alma Street, Menlo Park

February...12, **PAARA Board Meeting 7:30**
Red Cross Bld., 400 Mitchell Ln., Palo Alto

March.....7, **PAARA Meeting, 7:30**

March.....12, **PAARA Board Meeting 7:30**

April.....4, **PAARA Meeting, 7:30**

April.....9, **PAARA Board Meeting 7:30**
The ARRL has a code practice:
URL <http://www.pcpractice.com/CW/>
-Don KF6JMQ

PROGRAM

February 7, 2003 7:30 P.M.



Speaker:

Bonnie Crystal, KQ6XA

*"Cave radio communication and exploration—
mapping—mountain climbing"*

Join us for pre-meeting eyeball
at Su Hong Restaurant, 1039 El Camino Real, Menlo Park
Food will be served at 6:00 sharp, so guests will be on time for the PAARA
meeting. Those arriving late will be responsible for their own order and bill.

—PAARA Radio NET every Monday evening at 8:30 P.M., local time—
on the 145.230 -600 MHz repeater, PL tone off

Bonnie Crystal, KQ6XA

*Cave radio communication and exploration—mapping—
mountain climbing!* Come here about Bonnie's extraordinary adventures and technical exploits, all with radio in hand. In 1999, she was a member of a South American cave expedition (OA2/KQ6XA), which discovered the deepest free-fall pit in the southern hemisphere. She set the standard for through-the-rock cave communication using Low Frequencies. Hear how to transmit two thousand feet below with a S9+ signal, using two separated ground rods, a feed line, and a transceiver.



Bonnie has a major involvement in HF Pack, amateur Pedestrian Mobile, and the design and testing of antennas. For some great antenna ideas, go to <http://www.qsl.net/kq6xa/antenna/>.

See Bonnie in QST, Feb. 2003 page 21.

In Borneo, Bonnie explored the Sarawak Chamber by making her way through raging underground waterfalls, poisonous snakes, spiders as big as your hand, deadly fire centipedes, and tiger leeches to reach the "largest underground passage in the world".

Bonnie was Co-Founder and Chief Technology Officer of Telegen, makers of HGED flat panel TV screens.

She invented Telisar - digital TV channel-doubling technology; VNR (video noise reduction), and was instrumental in the field of medical imaging, where she designed higher resolution MRI machines. In the 1980's she was involved in the shrinking of satellite dishes, making "Satellite TV" a household word.

"Be all that you can be" certainly pertains to Bonnie. Come and meet this extraordinary person, and enjoy a fantastic "full screen" presentation!

This will be a very special evening, you will not forget. Please do not miss this event!

(Continued on page 14) Crystal

Miscellaneous Dates

ELECTRONIC FLEA MARKET @ Foothill College

Second Saturday of month, March -October, 6 AM-2PM
(Perham Foundation Sponsorship has discontinued. Continued Flea Market will depend on finding a new sponsor. A group has been formed and applied for non-profit status and will plan future market date assignments. PAARA has the first date which is March.. More information as is known.)

PAARA Palo Alto Amateur Radio Association

meets 1st Friday 7:30 each month, Net 145.230 each Monday 8:30,
 contact: Andreas Junge N6NU.....(650) 233 0843

FARS Foothills Amateur Radio Society

meets 4th Friday 7:30 each month,

contact: <http://www.fars.k6ya.org>.

NCDXC Northern California DX Club

meets 2nd Friday 7:30 each month, repeater for member info 147.360, Thur 8:00PM,
 contact: Bob Mammarella KB6FEC 408 729 1544.

NorCalQRP Northern California QRP Club

meets 1st Sunday each month,

contact: Jim Cates 3241 Eastwood Rd., Sacramento, CA 95821.

Perham Foundation (discontinued)

SPECS Southern Peninsula Emergency Communication System

meets each Monday 8:00PM on Net 145.27, 440.80 MHz, www.speccsnet.org
 contact: Tom Cascone, KF6LWZ, 650-688-0441 speccs@svpal.org

SCARES South County Amateur Radio Emergency Service

meets 3rd Thursday 7:30 each month, San Carlos City Hall.
 Net is on 146.445 [PL 114.8] & 444.50 (PL-100) 7:30 Monday evenings.
 contact:

SCCARA Santa Clara County Amateur Radio Association

Operates W6UU repeater 146.385+ Nets: 2m, W6UU, 7:30 Mon; 10m, 28.385, 8:00 Thur. meets 2nd Mon each month.
 contact: Barbara Britten, KD0QEI at 293-3847

SVECS Silicon Valley Emergency Communications

Operates WB6ADZ repeater (146.115 MHz+)
 contact: Lou Stierer WA6QYS 408 241 7999

WVARA West Valley Amateur Radio Association

operates W6PIY repeater 147.39+, 223.96, 441.875, 1286.2
 meets 3rd Wed every month.

contact: Glen Lokke Jr. KE6NBO at 408 971 8626, or glokke@pacbell.net

Disaster Services.

PALO ALTO CHAPTER, American Red Cross, www.paarc.org

400 Mitchell Lane

Meets 3rd Wed. each month 7:30PM.

HF, packet, BBS, ATV, OSCAR Gateway, NASA satellite.

contact: Mac Millian 650-688-0423. MACM@paarc.org

SAN JOSE CHAPTER, American Red Cross

contact: Scott Hensley KB6UOO, (408) 967 7924, FSHENSLEY@NOVELL.COM

VE Exams. 3rd Saturday each month, 10:30AM, 145.23 - PL=100Hz

Redwood City Main Library..Community Conference Room
 1044 Middlefield Road, Redwood City, CA

contact: Al WB6IMX@att.net

Swap meet, LosPositas College, Livermore, 1st Sunday each month

Contact: Cliff Kibbe (209) 835 6715 or Eliot Ross (925) 606 7710

Palo Alto Amateur Radio Association, Inc. **PO Box 911**

Menlo Park, CA 94026

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 ARES Officer.....Lily Anne Hillis, N6PGM.....(650) 325 5484
 Club Historian Vacant?
 Advertising.....Bob Korte, KD6KYT.....(650) 595 1842
 WebmasterCurt Kolovson, AE6EJ.....
 ae6ej@arrrl.net

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 tucker.gerry@ssd.loral.com
 Rolf Klibo, N6NFI (650) 856-2748 '03
 klibo@earthlink.net
 Adrianus Schrauwen, W6AJS '04
 hagenees@att.net

(see "Calendar" for Board meeting times, visitors welcome)

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Submit material for PAARAgaphs by the 15th

Use WORD or rich text, ascii, .pub, or .jpg.

PAARA Website: www.paara.org

Instructions on how to subscribe to PAARA mailing list

Here are the steps in the long form:

- 1) go to <http://mailman.qth.net/>
- 2) click on: "To Subscribe to Lists Click Here!"
- 3) Find PAARA on list and click on it
- 4) enter your email address and pick a password
- 5) hit the "Subscribe" button

The short form of the instructions are:

- 1) go to <http://mailman.qth.net/> and follow the instructions.
 Andreas, N6NU

PAARA WEB

Thanks to Andreas Junge, N6NU
 and

Curt Kolovson, AE6EJ, Webmaster

PAARA has a new web site. Check it out.

www.paara.org

PAARA IN ACTION

by Terry Finn. AF6TF

'The New Years Eve Caper'

The sun was setting behind the cloudy western sky and the rain was starting to fall again in the rather cool evening. It was December 31, 2002, and several Association members were busy again taking care of some rather important business. These fine members of our Association were once again sloping around in the mud, straining their backs and exercising those infrequently used muscles to provide yet another service for the Association members.



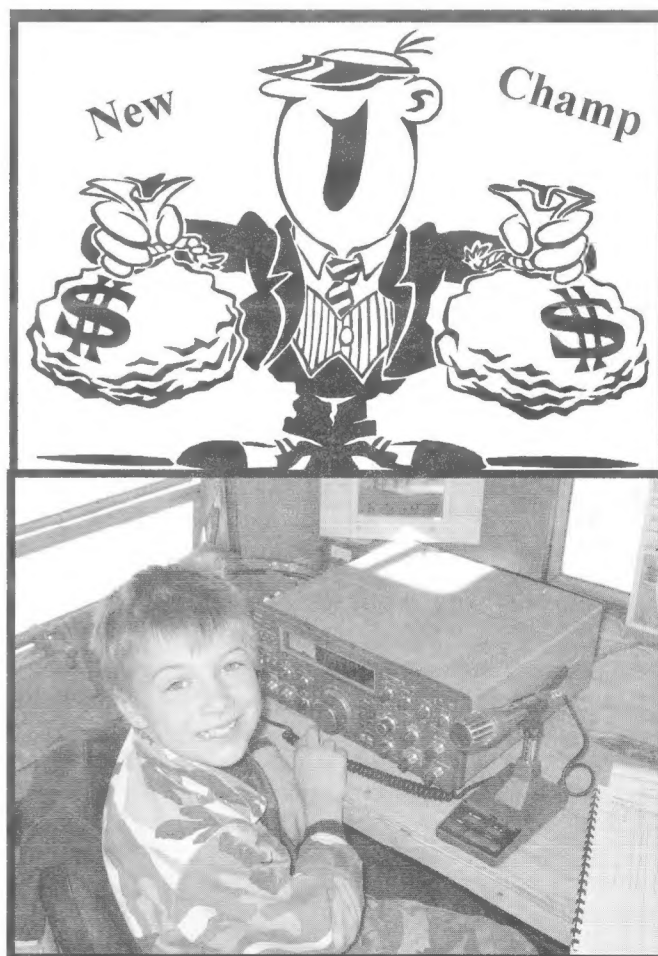
The leader of this little group of evening skulkers was none other than **Gerry Tucker, N6NV**, accompanied by his very helpful brother, **Rich Tucker**. Also in attendance was **Rolf Klibo, N6NFI**, the tall quiet one; **Bob Korte, KD6KYT**, the cigar smoking supervisor of activities; and **Terry Finn, AF6TF**, the expeditor.

Their mission was to move the Field Day Trailer from its temporary storage place to a more permanent home or storage facility. For those Association members who are not 'in the know', it should be clarified that this is the 1952 RMD (Roadmaster) double axel house trailer that used to be stored at 3645 Haven in Menlo Park. Prior to that temporary placement, this trailer had been located at SRI for more than 40 years. It was donated to our Association about 1962 and has been used occasionally for Field Day activities.

It is now located at a much more secure and easily accessible storage area in the rear RV parking lot at Harbor Village, 3015 East Bayshore Road in Redwood City. This site has been generously donated to the Association by **Terry Finn, AF6TF**. Certain experienced and qualified members

of our Association are now invited to donate their time, money and equipment to bring this trailer up to speed (so to speak). It requires carpenters, electricians, mechanics, low voltage electric technicians, painters, carpet layers and graphic artists. We should make this a 2003 project so that this trailer will have the appearance of a professional, fully functional communications vehicle, that we will all be proud to be a part of, especially when it is on display somewhere.

We have all seen the other communications vehicles built up by other Clubs, so now it is our time to put some effort into this project. We have the manpower, experience and potential funding within our membership. The coordinator of this project shall be our very own Association Property Master, **Gerry Tucker, N6NV**. He will be announcing dates of work parties and suggestions for this project.

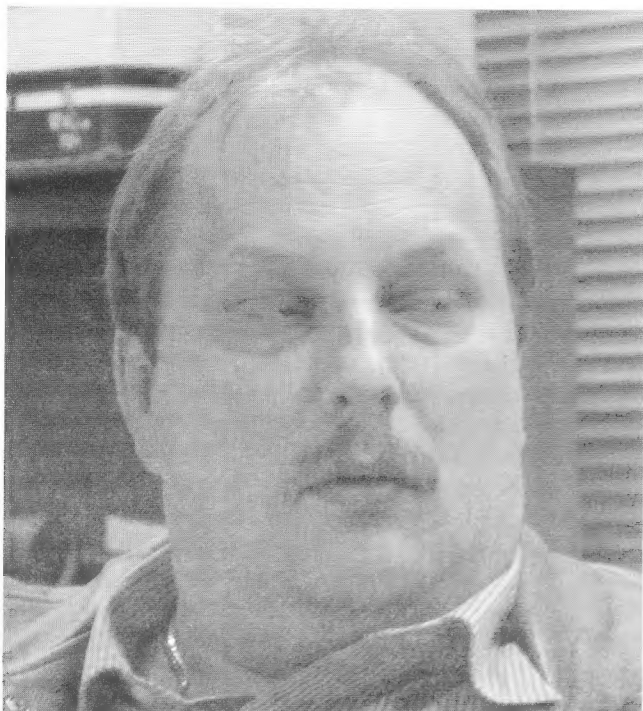


Kyle Rice, KG6MSK

A record sale of Drawing Tickets at January Meeting

\$118

this will be added to the drawing prize fund



Andreas Junge N6NU, PAARA President



Gerry Tucker, N6NV shows perpetual Field Day Award



Presidents Corner

de N6NU

Dear PAARA members,

We are in our 66th year of existence and the new year started with the amazing PAARA/FARS Winter Party. The food was excellent and **Jim, Lisa and Kyle Rice** did an outstanding job to get the speaker, **Tom Schiller, N6BT**. What a funny guy. I never laughed so hard during a presentation before. We had over \$1000 in raffle prices and there were plenty of winners. Yes, I won 75 feet of 9913 coax. It was hard to explain my excitement over it to my wife; I guess I am the nerd in the house. Thanks to everybody who helped from PAARA and FARS.

We have a winner in our WAS/CW (Worked All States in CW) competition. **Ron Chester, W6AZ**, reported that he finally managed to bag the last state. Remember, he is the one using the ribbon cable in the attic as antenna! Ron, congrats! So, now we just have to wait for the NorCal 30 to come out.

This year I would like to push the building of projects. We have VERY talented people in our club and I would like to tap into their resources. Bring your Show'N'Tell to the meetings! And always remember: The one who says "It can not be done" should not disturb the man who is doing it! More about this in the next PAARAgaphs.

See you at the next meeting es 73,

Andreas, N6NU



Jim Rice K6AK, PAARA Vice President



Soap Box Operations

by Jay Melvin WA6SBO

Designing a Satellite (sub)Station

Appliance operation of a ham station is pretty much limited to handie-talkies where, after unpacking a new transceiver, reading the manual gets done during the hours while the virgin battery gets charged. Most every other initial station operation entails design, development and debug. Such shouldn't be done hurriedly since plugging and hiding misplaced drilled holes costs plenty of lost face, at least.

Santa Claus brought me a K5GNA@AOL.COM AMSAT - OSCAR (Orbiting Satellite Carrying Amateur Radio) dish antenna with a built in 13 centimeter to 2 m down converter that includes 50' of CATV cable to hook the 3' rectangular grid dish (it looks like a warped BBQ grill) and F to BNC adapter and two 6 dB attenuator pads. The ad says, "Ready for Plug N Play with your 2 meter RX. It picks up the middle beacon at 3 to 4 S units out of the noise." On the boom that holds the assembled dipole at the focal point of the parabola-section is an AIDC 3731 down converter that **K5GNA** has modified for Amateur use with "a narrowband 4 pole combline filter at the input and output of the preamp, it has a better Noise Figure and better front end selectivity than the 3373 (or any other Ham preamps or down converters)."

Well, I need to mount and point and protect all that fancy sensitive electronics. This simple addition to my extant station should add a band and give me (receive) access to the new marvel of Amateur Radio, AO-40. Back around 1978 I worked OSCAR 7 & 8, two satellite repeaters with linear transponders (for CW & SSB) in an up on 2 m and down on 70 cm ('B' mode) so I have some confidence this is a viable project design with a successful conclusion (QSLs) in the near future.

My station already includes a general coverage multi-mode receiver with which I plan, on 2 m, to listen to the 13 cm AO-40 downlink. Keeping the receiver separate from the transmitter (i.e., no transceiving!) provides protection and eliminates a lot of control circuitry requisite to preventing accidental transmission into the receive down converter. Such an accident would smoke the RF preamp in well under 1 s. This consideration and the tactical solution is my prime example of what is not Plug N Play about station design and operation. Santa only brought one down the chimney and these surplus modified systems are becoming rarer and costlier.

I have two ways of generating CW & SSB on 70 cm; one involving a 25 year old MMT transverter with my HF rig's 10 m transmitter power divided down to 1/10 watt with 10 w output or my new backpacker with 5 w. The latter is easier since it avoids the external (read: home brew) power di-

vider. That 5 w I'll ship to an as yet unbuilt cubical quad / yagi (quagi) antenna. Again, the **K5GNA** down converter is protected since my 70 cm transmissions will be over a separate rig, transmission line and antenna - all physically disconnected from the receiver and its sensitive and fragile front end.

The placement of the equipment in the shack is an already done deal in my mature (read: old or ole) station and the cable making and connecting are old hat around here. The window of my house in the shack already has a wooden board feed through where I drill holes for coax or twin lead transmission line egress. The station's 13.8 vdc power supply or the **K5GNA** - supplied wall wart with interface will provide voltage via the coax to the down converter.

More complexity pops up in the form of two antennas. Pointing the two antennas, one each for uplink and downlink, requires antenna mounting. I'll have to point them with the same rotator pair (Az/El) or, worse though cheaper, manually, by (wsa.comwww.nl) software on a MS Windows machine. Not high direct or indirect control of my copy of NOVA though! Ground level versus, say, 60' are equally close to AO-40, practically. The BBQ grill styled downlink dish comes with two pole brackets for mast mounting and the still -in-my-head quagi for uplink is on a wooden boom with its own mast bracket.

My design philosophy includes parsimony and portability. Keep It Stupid Simple (KISS) suggests an aluminum ladder that can be collapsed and carried in my pickup truck to FD or the Emergency Operations Center with little effort. Mounting the dish and quagi entails two stages - one, manually pointed. A screw (like **Bill AA6AP** demonstrated at PAARA with his dish on a dolly jig) of 18" or so is turned to set elevation. Stage two may include the as yet unfunded Az/El rotator pair under NOVA control.

In the manual configuration, my current approach is to use door hinges mounted to the ladder's step. The other side of the hinge is to mounted to a aluminum rectangular plate to which the dish will mount. The altitude adjusting screw's nut will be ... well, that is a hands-on design project. Here, at the keyboard, my ideas lack the practical side of my experience so that one nut must remain loose for awhile. Don't laugh.

AO-40 is said to provide 8 to 16 hours of operation per orbital pass and at its altitude half our planet is within its window of coverage. As I lash up my satellite station, my considerations are safety (to self & rig), portability and simplicity. And, lots of the enjoyment is in the doing of it, the building of the station. After all, I get to chew the fat in person with hams at PAARA meetings regularly. **SK**

Change of address:

Douglas Schliebus, K1DIT
801 Buck Mountain Road
Eastsound, WA 98245

former PAARA treasurer



HE'S HOPING THAT IF HE FEEDS ENOUGH OF THAT DOWN THERE, HE'LL HAVE A GOOD GROUND FOR HIS SHACK!

Webb site for propagation information:
www.arrl.org/wlaw/prop/

RadioFest 2003

Sponsored by
Naval Postgraduate School Amateur Radio Club
 Sanctioned by the American Radio Relay League

February 22, 2003
 7:00 a.m. - 3:00 p.m.

A Free Public Service & Family Event!

General Stilwell Community Center
 Ord Military Community (old Fort Ord)
 4260 Gigling Road, Seaside, CA

Flea Market
 Vendor Booths
 Amateur Radio Demonstrations
 Free Ham License Exams
 Fantastic Guest Speakers
 Door Prizes

Talk-in: 146.97- PL 94.8
<http://www.radiofest.org>

-K6AK & KG6KQS

(Continued from page 9) Crystal

Bonnie Crystal KQ6XA:

Involved in HF Pack/ amateur Pedestrian Mobile and traveling Portable rigs.

Designs and tests Antennas.
[\(http://www.qsl.net/kq6xa/antenna/\)](http://www.qsl.net/kq6xa/antenna/)

July-August 1999 South American Cave Exploration Expedition used HF and VHF radio. **OA2/KQ6XA**

Cave exploration/ mapping/set the standard for through-the-rock cave communication using Low Frequencies.

Cave Radio/ Communication works by sending electromagnetic signals through the rock. GPS does not work.

Member of an expedition that discovered the deepest free-fall pit in the southern hemisphere.

Explored the Sarawak Chamber on Borneo/(has headhunters). Made her way through raging underground waterfalls, poisonous snakes, spiders as big as your hand, deadly fire centipedes, and tiger leeches to reach "the largest underground passage in the world". Sarawak Chamber.

Crawled through hot steam caves on a Pacific island next to an active volcano.

Swam in underground rivers amongst blind fish.

Mountain climbing in freezing temperatures to reach alpine caves where howling 50 M.P.H. air flows like a wind tunnel down deep inside the caves.

Slides and wades through slippery guano, slimy crevices, knee deep clay-mud, and rappelling down 1000 foot nylon ropes in complete darkness...

1980's/ shrunk the size of satellite dishes, making "Satellite TV" a household word.

Instrumental in the field of medical imaging/ designed higher resolution MRI machines.

Co-Founder and Chief Technology Officer of Telegen / makers of HGED flat panel thin TV screens.

Inventor of Telisar /digital TV channel-doubling technology.

Invented VNR/ Video noise reduction.

from K6AK & KG6KQS

NEW MEMBER

Pat Halahan, KG6JDE

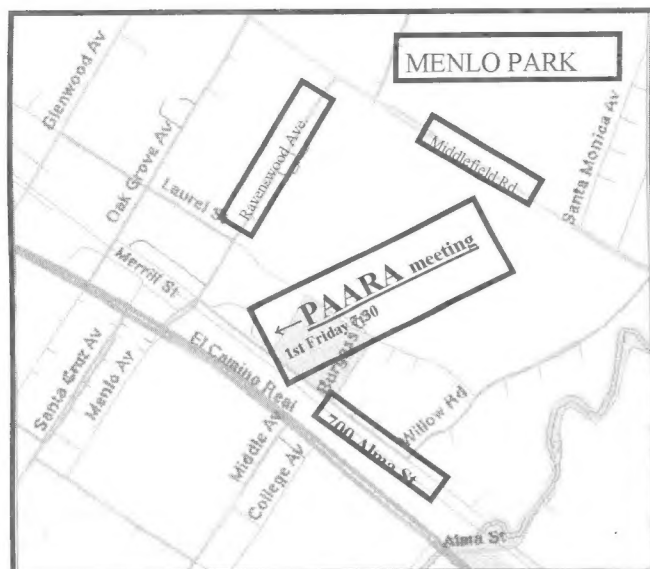
3932 Casanova Dr.
 San Mateo, CA 94403

*Pat's daughter and wife
 got their radio license last Saturday the 18th
 Bob Korte KD6KYT*

NEW MEMBER

Michael Spohn KG6NTX

2024 Greenwich Street
 San Francisco, CA 94123
mikespohn@terravite.com



Want and For Sale ads in
PAARAgaphs
are FREE to members

(Submit by e-mail or letter before the 15th of the month)

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Join us for pre-meeting eyeball

QSO February 7th gab & gobble

Food will be served at 6:00 sharp, so guests will be on time for the PAARA meeting. Those arriving late will be responsible for their own order and bill.

6 pm— at Su Hong Restaurant
1039 El Camino Real
Menlo Park
—across from Kepler's Book Store—

PAARA Radio NET

every Monday evening
8:30 P.M., local time

on the

145.230 -600 MHz repeater

PL tone off

control operators

1st Mon KG6ILA, Pinkney Foster

2nd Mon N6NU, Andreas Junge

3rd Mon AD6FX, Jon Zweig

4th Mon AA6PA, Bill Rausch

5th Mon tba

PAARAgaphs Ad Rates

PAARAgaphs accepts paid advertisements from non-members.

(short personal ads remain free for members in good standing).

All ad rates listed are per issue only.

1. Not for profit ads by association members for ham-related items and wants. No cost for business card size ads (additional space at \$2.50 per business card size).

2. For Profit organizations and/or individuals: \$5-business card size, \$25-half page, \$50 full page or back cover.

These fees may be reduced or waived in exchange for a valuable consideration that is given to the Association or its general membership. Such consideration must be in addition to any existing arrangements with the association.

The PAARAgaphs editors reserve the right to reject any ad deemed to be not in the best interest of the Association. All fees payable in advance by the year with "scanner-ready" copy or text-only ads. Give payment and copy to Bob Korte

PAARA · Palo Alto Amateur Radio Association · P.O. Box 911, Menlo Park, California 940260911

• Club meetings are on the first Friday of each month, 7:30pm at the Menlo Park Recreation Center, 700 Alma Street, Menlo Park, CA •

• Radio NET every Monday evening, at 8:30pm, on the 145.230-600 MHz repeater, PL tone off. •

Membership in PAARA is \$12.00 per calendar year which includes a subscription to PAARAgaphs, \$6 for additional family members (no newsletter).

Make payment to the Palo Alto Amateur Radio Association.

Permission is granted to reprint from this publication with appropriate source credit.

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